

# TM Series

Permanent Magnets Generators for Wind Turbines up to 300 kW



## Robust and maintenance free gearless solutions

Especially designed to operate at low speed, Parker TM Series Generators allow to remove mechanical speed increasers which are responsible for up to 20% of wind turbines downtimes. Based on permanent magnets technology, Parker TM Series generators not only offer increased availability and lifetimes compared to traditional induction generators with gearboxes, but they are also more efficient and compact. Together with Parker AC890PX Series Power Converters, they form a complete solution for the revamping of small and medium wind turbines, up to 300 kW.



## Information Contact Features and Benefits

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- Low speed generators allowing to suppress mechanical speed increasers
- Delivered as ready-to-use framed generators or as separate rotor and stator elements to be integrated into the mechanical structure
- Clean coupling to the grid and accurate speed control with Parker AC890PX Series Power Converters
- Availability increased up to 20%
- Reduced number of mechanical components
- No Maintenance
- Increased compactness
- Increased lifetime
- Maximum wind power extraction
- Optimised costs and weight



ENGINEERING YOUR SUCCESS.

# Complete Solutions for Wind-Turbines

Parker solutions for Wind-Turbines consist of robust, maintenance free permanent magnets generators associated with modular, high performances power converters.

## Robust and Maintenance Free PM Generators

Permanent magnets generators distinguish from conventional fixed speed and double-fed induction generators by their capacity to deliver high power at low speed. In most cases, this allows to completely remove mechanical speed increasers, or at least to reduce their size, leading to more compact, more efficient, and above all, more reliable systems.

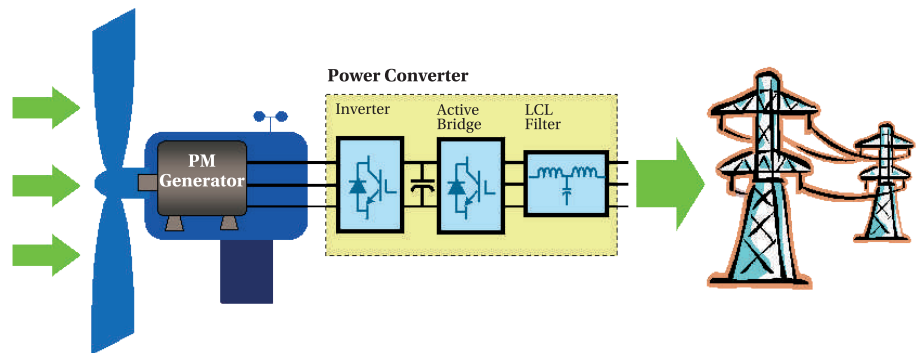
Parker generators are delivered as complete ready-to-install framed solutions, or as kits consisting of separate rotor and stator elements to be integrated into the mechanical structure of the machine. The kit approach leads to even simpler mechanical designs, for further reduced costs and weights.

## Modular, High Performances Power Converters

Parker also supplies complete and ready-to-use power converters, performing clean and efficient energy injection to the grid, as well as accurate speed control of PM Generators, for maximum wind power extraction.

Parker AC890PX Series Power Converters are made of standard building blocks combined to form complete systems, including inverter, active bridge and LCL filter. Available with advanced liquid cooling, they offer extremely compact solutions for applications up to 1 MW.

## A Typical Wind Turbine



Wind Energy is Captured

Electrical Energy is injected to the Grid

## TM Series PM Generators

<b>Rated Power</b>	up to 300 kW
<b>Rated Speed</b>	up to 500 rpm
<b>Voltage</b>	400/480 V
<b>Protection class</b>	IP54
<b>Cooling System</b>	<ul style="list-style-type: none"> <li>• Water cooling (Standard)</li> <li>• Natural ventilation (on request)</li> </ul>



## AC890PX Series Power Converters

<b>Rated Power</b>	up to 1MW
<b>Voltage</b>	400 - 690 V
<b>Protection class</b>	<ul style="list-style-type: none"> <li>• IP21 / NEMA 1 (Standard)</li> <li>• IP52 (on request)</li> </ul>
<b>Total Harmonic Distorsion</b>	< 3%
<b>Cooling System</b>	Air or liquid

